

Patent claims

1. System for protection link fault supervision between two nodes (1, 11) in a transmission network, the nodes (1, 11) being connected by first (6) and second (8) transmission lines carrying identical data traffic between the nodes (1, 11), each node (1, 11) including a first, active or working, line termination board (2) terminating said first transmission line (6), a second, passive or standby, line termination board (3) terminating said second transmission line (8), and a node core (4) including a link supervision block (10), said line termination boards (2, 3) being adapted to report faults to the link supervision block (10), said node core (4) being adapted to switch traffic between the line termination boards (2, 3) in case of a fault,
- characterized in that both line termination boards (2, 3) are adapted to report fault state changes spontaneously when they are detected to the link supervision block (10),
- the link supervision block (10) is adapted to store received fault causes and correlate the latest received fault causes from each line termination board (2, 3) with the latest received fault cause from the other line termination board (2, 3),
- the system further including a persistency timer adapted to be started by the link supervision block (10) in order to supervise the persistence of a correlation result, if the correlation result has not disappeared during a persistency timer period, the link supervision block (10) is adapted to request the node core (4) to switch traffic between the line termination boards (2, 3).

2. System as claimed in claim 1, characterized in that each line termination board (2, 3) includes an additional persistency timer,
- when a fault is detected in one of the boards (2, 3) the

board is adapted to start its additional persistency timer in order to supervise the persistence of the detected fault,
if the fault has not disappeared during a persistency timer
5 period, the line termination board is adapted to report the fault to the link supervision block (10).

3. System as claimed in claim 1 or 2,
c h a r a c t e r i z e d i n that said transmission
network is a Synchronous Digital Hierarchical based
10 network.

4. System for protection link fault supervision between two nodes (1, 11) in a transmission network, the nodes (1, 11) being connected by first (6) and second (8) transmission lines carrying identical data traffic between
15 the nodes (1, 11), each node (1, 11) including a first, active or working, line termination board (2) terminating said first transmission line (6), a second, passive or standby, line termination board (3) terminating said second transmission line (8), and a node core (4) including a link
20 supervision block (10), said line termination boards (2, 3) being adapted to report faults to the link supervision block (10), said node core (4) being adapted to switch traffic between the line termination boards (2, 3) in case of a fault,

25 c h a r a c t e r i z e d i n that each line termination board (2, 3) includes a persistency timer,

when a fault is detected in one of the line termination boards (2, 3) the line termination board is adapted to start its persistency timer in order to supervise the
30 persistence of the detected fault.

if the fault has not disappeared during a persistency timer period, the line termination board is adapted to immediately report the fault to the link supervision block (10),

35 the link supervision block (10) being adapted to store received fault causes and correlate the latest received

fault causes from each board with the latest received fault
cause from the other board,
if the link supervision block (10) decides that a fault has
occurred, it is adapted to request the node core (4) to
5 switch traffic between the line termination boards (2, 3).

5. System as claimed in claim 4,
c h a r a c t e r i z e d i n that said transmission
network is a Synchronous Digital Hierarchical network.